

Appl. No. : 10/614,644  
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### AMENDMENTS TO THE CLAIMS

1-92. (Canceled)

93. (New) A self-contained adipose-derived stem cell processing unit, comprising:

a tissue collection container that is configured to receive adipose tissue that is removed from a patient, wherein said tissue collection chamber is defined by a closed system;

a first filter that is disposed within said tissue collection container, which is configured to retain adipose tissue and pass lipid, blood, and saline;

a cell collection chamber, which is configured to receive and concentrate a population of cells that comprise adipose-derived stem cells from said tissue collection container, wherein said cell collection container is within said closed system; and

an outlet configured to allow the aseptic removal of said concentrated population of cells that comprise adipose-derived stem cells.

94. (New) The device of Claim 93, wherein said tissue collection container is configured to receive lipoaspirate.

95. (New) The device of Claim 94, wherein said tissue collection container is coupled to a cannula.

96. (New) The device of Claim 94, wherein said tissue collection container is coupled to a suction device.

97. (New) The device of Claim 93, wherein said tissue collection container is configured to receive adipose tissue that is removed by excisional lipectomy.

98. (New) The device of Claim 93, wherein said first filter has a pore size of about 20 $\mu$ m to about 5mm.

99. (New) The device of Claim 98, wherein said first filter is a mesh with a pore size of about 265um.

100. (New) The device of Claim 93, wherein said tissue collection container is configured to receive an additive.

101. (New) The device of Claim 100, wherein said tissue collection container is configured to agitate said adipose tissue and said additive.

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102. (New) The device of Claim 93, wherein said adipose-derived stem cell processing unit comprises a centrifuge.

103. (New) The device of Claim 93, wherein said cell collection container comprises a spinning membrane filter.

104. (New) The device of Claim 93, further comprising a second filter configured to pass said population of cells that comprises adipose stem cells and retain material larger than said population of cells.

105. (New) The device of Claim 104, wherein said second filter is within said cell collection container.

106. (New) The device of Claim 93, wherein said cell collection container is configured to receive an additive.

107. (New) The device of Claim 93, wherein said cell collection container is configured to wash said concentrated population of cells that comprise adipose-derived stem cells.

108. (New) The device of Claim 93, wherein the cell collection container is configured to separate said concentrated population of cells that comprise adipose-derived stem cells based on a difference in electrical charge.

109. (New) The device of Claim 93, wherein the cell collection container further comprises a means to agitate said concentrated population of cells that comprise adipose-derived stem cells.

110. (New) The device of Claim 106, wherein the cell collection container further comprises a means to agitate said concentrated population of cells that comprise adipose-derived stem cells.

111. (New) The device of Claim 93, wherein the cell collection container further comprises a means for washing said concentrated population of cells that comprise adipose-derived stem cells.

112. (New) The device of Claim 106, wherein the cell collection container further comprises a means for washing said concentrated population of cells that comprise adipose-derived stem cells.

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113. (New) The device of Claim 93, wherein said cell collection container comprises a means to separate said population of cells that comprise adipose-derived stem cells by density gradient.

114. (New) The device of Claim 93, wherein said cell collection container comprises a means to separate said population of cells that comprise adipose-derived stem cells by adherence to plastic.

115. (New) The device of Claim 93, wherein said cell collection container comprises a means to culture cells.

116. (New) The device of Claim 93, further comprising a mixing container joined to said tissue collection container, which comprises a port for the addition of an additive, wherein said mixing container is within said closed system, and wherein said cell collection container is positioned between said tissue collection container and said mixing chamber.

117. (New) The device of Claim 116, wherein said second filter is positioned between said cell collection container and said mixing container.

118. (New) The device of Claim 117, wherein said second filter has a pore size of between 20 $\mu$ m and 200 $\mu$ m.

119. (New) The device of Claim 93, further comprising a temperature controller.